Wyoming Nutrient Strategy
2020 Priorities

Boysen Reservoir Nutrient Initiative

1. Collect chemical, physical, and biological data on Boysen Reservoir to better understand nutrient and cyanobacteria community dynamics in the reservoir
2. Continue to fund monthly nutrient monitoring at USGS sites on the three major tributaries (Wind River, Fivemile Creek, and Muddy Creek) and Wind River downstream from Boysen Dam
3. Continue to work with stakeholders to refine goals, objectives, proposed work groups, etc. to plan proactive efforts to reduce nutrient loading to Boysen Reservoir
4. Continue to work with the Natural Resource Conservation Service (NRCS) and other stakeholders to bring a Watershed Coordinator on board to help facilitate the planning phase of the initiative
5. Work with stakeholders to plan and conduct a nutrient monitoring project at United States Geological Survey (USGS) continuous discharge gage sites on the Little Wind River and Wind River near Riverton, Wyoming to better understand nutrient contributions in the watershed
6. Work with EPA and the Wyoming Association of Rural Water Systems to plan and host a lagoon optimization training with Steve Harris
7. If the "Identifying, Predicting, and Managing the Occurrence of Harmful Cyanobacterial Blooms (HCB) in Wyoming Reservoirs" Water Research Program proposal is funded by the legislature, work with researchers at the University of Wyoming to design and implement a study to identify nutrient management targets to prevent harmful densities of cyanobacteria in Boysen Reservoir

Criteria Development

1. Continue working on numeric nutrient criteria for Wyoming Basin Lakes by completing internal review of technical support document; sharing technical support document with the United States Environmental Protection Agency (USEPA) and addressing their comments; and sharing with the Wyoming Nutrient Work Group
2. Continue working on developing more detailed assessment methods aimed at identifying whether existing narrative standards that address nutrient pollution are being met or exceeded; share draft methods with the Wyoming Nutrient Work Group
3. Continue to collect data on surface waters that can be used to support criteria development
4. Continue working with stakeholders to refine the sampling and analysis plan (SAP) for Brooks Lake, currently included on Wyoming's 303(d) list of Impaired Waters, and begin implementing SAP
5. Consider how to prioritize waters on Wyoming's 303(d) List of Impaired Waters for criteria development and nutrient reduction efforts

Harmful Cyanobacterial/Algal Blooms

1. Work with resource management agencies (State Parks, Game and Fish, etc.), Department of Health, and Wyoming Livestock Board to improve monitoring, advisory, and public notification process
2. Work with partners to conduct a permanent signage pilot project on Boysen Reservoir

3. Explore options for improving surveillance, monitoring, determining when to lift recreational use advisories, and increasing public awareness about harmful cyanobacterial blooms (HCBs)
4. Update harmful cyanobacterial bloom action plan, standard operating procedures, and refine resources available at wyohcbs.org
5. Continue to utilize the web map for reporting current and historic HCB advisories
6. Continue to refine process for using satellite imagery to inform HCBs management
7. If the "Identifying, Predicting, and Managing the Occurrence of Harmful Cyanobacterial Blooms (HCB) in Wyoming Reservoirs" Water Research Program proposal is funded by the legislature, work with researchers from the University of Wyoming to verify cyanobacteria densities obtained from satellite imagery and evaluate potential environmental drivers of cyanobacterial blooms in Wyoming reservoirs
8. Evaluate need and potential costs to analyze water samples for cyanotoxins other than total microcystin, cylindrospermopsin, and anatoxin-a
9. Continue to coordinate with USEPA and public water supplies on potential impacts of HCBs on public water supplies
10. Continue to request updates from USEPA regarding cyanotoxin monitoring under the Fourth Unregulated Contaminant Monitoring Rule

Additional Point Source Efforts

1. Develop a point source nutrient webpage with information and resources for permittees interested in addressing nutrient pollution, including information on proactive efforts to address nutrient pollution such as lagoon optimization, mechanical plant optimization, and wastewater reuse
2. Identify an outreach strategy to educate point sources and potential cooperators about reuse/recycling and work on addressing potential barriers
3. Continue to incorporate nutrient monitoring requirements into Wyoming Pollutant Discharge Elimination System (WYPDES) permits that discharge upstream of priority waters
4. Support the City of Laramie wastewater treatment plant's voluntary enhanced nutrient removal work and explore options for additional voluntary extended aeration plant enhanced nutrient removal work

Additional Nonpoint Source Efforts

1. Continue discussions with Wyoming Natural Resource Conservation Service (NRCS) to educate NRCS staff on water quality issues related to nutrients and DEQ staff on NRCS programs, including the Soil Health Initiative
2. Continue discussions with the Nonpoint Source Task Force on ways to strategically use Nonpoint Source Program grant funds to address nutrient pollution in Wyoming

Education and Outreach

1. Work with Wyoming Nutrient Work Group to develop and finalize 2020 priorities
2. Report progress and updates to Wyoming Nutrient Work Group
3. Update nutrient pollution webpages with relevant information
4. Identify strategies to increase public awareness about nutrient pollution and efforts to address nutrient pollution